

Work Order ID 69044

Wednesday, April 27, 2011 11:24:53 AM



Page 1

Item ID: D3943-7

Accept



Setup Start



Revision ID:

Stop



Item Name: Stud

Start Date: 4/27/2011 Start Qty: 8.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 8.00



Customer:

Reference:

Approvals:

Process Plan:

R

Date: 4/04/27

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3943	C								

100

0.00



Hardinge

Hardinge CNC Lathe Small

Memo

TURN AS PER DWG AND FOLIO EA864

FOLIO REV: _____

DWG REV: _____

2-DEBURR AS REQUIRED

*****TAP DRILL FOR 1/4"-28 IN CENTER OF PART*****

Manual Lathe

~~DO NOT~~ TAP DRILL only

10/05/24 (10)

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Quality Control

Memo

0.00

10/05/24 (10)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				10			
130 Packaging Packaging	Identify as per dwg & Stock Location: <u>W/4</u> Memo	0.00 0.00							
140 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

RQ 11.5 - 24

EL 11-5-23 X10

11/5/24

11-05-24

(10)

W/O:		WORK ORDER CHANGES						
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Picklist Print

Wednesday, April 27, 2011 11:24:59 AM

Page 1

Work Order ID: 69044

Parent Item: D3943-7

Parent Item Name: Stud



Start Date: 4/27/2011

Required Date: 5/3/2011

Start Qty: 8.00

Required Qty: 8.00

Comments: Est Rev:A New Issue 09-06-03 JLM Verified By:EC IPP Rev:B as per
dwg REV.C DD 10.02.22 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M1010R0.375		Purchased	No			100	f	1.0000	0.02	0.16			

ROUND BAR .375

Location

Loc Qty

Loc Code

MAT038

1

112886

1

.225 ~~10~~ 11/05/24

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NOTE: Date & initial all entries

ITEM No.	QTY -041	QTY -051	QTY -053	PART NUMBER	DESCRIPTION	PREFERRED SUPPLIER
1	X			D3943-041	GROUND HANDLING CRANK ASSEMBLY	
5	1	X		D3943-051	HANDLE ASSEMBLY	
6	1		X	D3943-053	CHAIN ASSEMBLY	
11		1		D3943-1	HANDLE	M/F HANDLE FROM DIS-ASSEMBLED ITEM 39
12	1			D3943-3	HANDLE EXTENSION	
13		1		D3943-5	PLATE	
14		2		D3943-7	STUD	
15			1	D3943-9	CHAIN	USE CHAIN SUPPLIED WITH ITEM 39
21	1			D2690-4	LANYARD	
22	1			D3585-1	SET SCREW	
23	1			D3949-041	REMOVE BEFORE FLIGHT FLAG	
24			1	D3954-5	CHAIN LUG	
25	1			D3954-7	RATCHET LUG	
26			1	D3954-9	GWT CHAIN PIN	
31	1			AN5-11A	BOLT	
32	1			AN960-516	WASHER	
33	1			MS21042L5	NUT	
39	1			8143919	LEVER CHAIN HOIST (POWER FIST)	PRINCESS AUTO / 4000 lbs CAPACITY
41	1			S-1475	SPRING	REID SUPPLY
42	1			3408A59	BALL PLUNGER	McMASTER CARR
43	1			HX-15	SOCKET HEAD CAP SCREW 1/2-20 UNC X 0.75 LG	HASKINS
44	1			HX-16	SOCKET HEAD CAP SCREW 1/2-20 UNC X 1.0 LG	HASKINS

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 69014

1010427

RELEASED
2010-10-18
WHS

C	RMV FINISH -041 (ZN A8-2), ADD NEW FINISH -051/-053/-1/-3 (A8-3/-4/-5), ADD CALIBRATION (A8-2), (1) HX-16 WAS HX-15 (B3-1, C3-1), PAR 10-001	CP	10.01.26
B	SHT 1 PL, ITEM 31 WAS AN4-10A, ITEM 32 WAS AN960-416, ITEM 33 WAS MS21042-4, ITEM 43 WAS 0.75 LG. SHEETS 2 - 5 NOTES: FINISH FOR ALL COMPONENTS NOW YELLOW SPRAY PAINT.	AJS	09.10.15
A	NEW ISSUE	AJS	09.05.13
REV.	DESCRIPTION	BY	DATE
DESIGN	DSTOW / AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<u>gp</u>	DRAWING NO.	REV. C
CHECKED	<u>js</u>	D3943	SHEET 1 OF 5
MFG. APPR.	<u>js</u>	TITLE	SCALE
APPROVED	<u>js</u>	GROSS WEIGHT TOW CRANK ASSY	NTS
DE APPR.	N/A	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	10.01.26		

W/O:		WORK ORDER CHANGES						
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NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

REMOVE AND RETAIN
RUBBER HAND GRIP

u/o 69044

DISCARD PIN

RETAIN PIN

REMOVE &
DISCARD HOOK

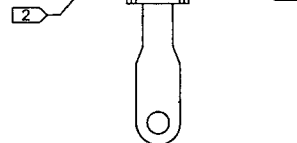
REMOVE & DISCARD HOOK

8143919 LEVER CHAIN HOIST
(SHOWN PRIOR TO MODIFICATION)
(CHAIN SHOWN SHORTENED FOR CLARITY)

8143919
LEVER CHAIN HOIST

AN5-11A BOLT
AN960-516 WASHER
MS21042L5 NUT

3408A59
BALL PLUNGER



(CHAIN NOT SHOWN FOR CLARITY)

RE-INSTALL
RUBBER HAND-GRIP
HERE

D3943-3
HANDLE EXTENSION

D2690-4 LANYARD

D3949-041 FLAG

HX-16 S/H CAP SCREW

HX-15 S/H CAP SCREW
S-1475 SPRING

CALIBRATION TAG
7

D3585-1 SET SCREW

RE-INSTALL PIN

D3954-7 RATCHET LUG

D3943-053 CHAIN ASSY

(CHAIN SHOWN SHORTENED FOR CLARITY)

D3943-041 GROUND HANDLING CRANK ASSEMBLY

RELEASED
R 2010-02-10

NOTES -041:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3943-041" USING FINE POINT PERMANENT INK MARKER
- 7) CALIBRATION TAG PER DART QSI 008 4.4 (ZN C1-2)

DESIGN	DSTOW / AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>JP</i>	DRAWING NO. D3943	REV. C
CHECKED	<i>JP</i>		SHEET 2 OF 5
MFG. APPR.	<i>JP</i>	TITLE	SCALE
APPROVED	<i>JP</i>	GROSS WEIGHT TOW CRANK ASSY	NTS
DE APPR.	<i>JP</i>	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE OR COMMUNICATIONS TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	10.01.26		

8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

D3943-1 HANDLE

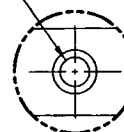
2 PL

9.75

2.00

Ø

0.41

Ø0.31
THRUØ0.12
THRUD3943-7 STUD
2 PLTHREAD 1/4-20 UNC-2B
2 PLTHREAD 1/4-20 UNC-2B
THRUVIEW A-A
A5-3
(SCALE 2X) B5-3

2 PL

9.37

A B1-3

A B1-3

D3943-5 PLATE

D3943-051 HANDLE ASSEMBLY**NOTES -051:**

- 1) MATERIAL : N/A
- 2) FINISH: POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3
- 3) TOLERANCES: X.XX DIMENSIONS +/- 0.06 ALL OTHERS
PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) MASK ALL THREADS PRIOR TO POWDER COATING

RELEASED
2010-02-10

DESIGN	DSTOW / AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	92	DRAWING NO.	REV. C
CHECKED		D3943	SHEET 3 OF 5
MFG. APPR.		TITLE	SCALE
APPROVED		GROSS WEIGHT TOW CRANK ASSY	NTS
DE APPR.	N/A	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	10.01.26		

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

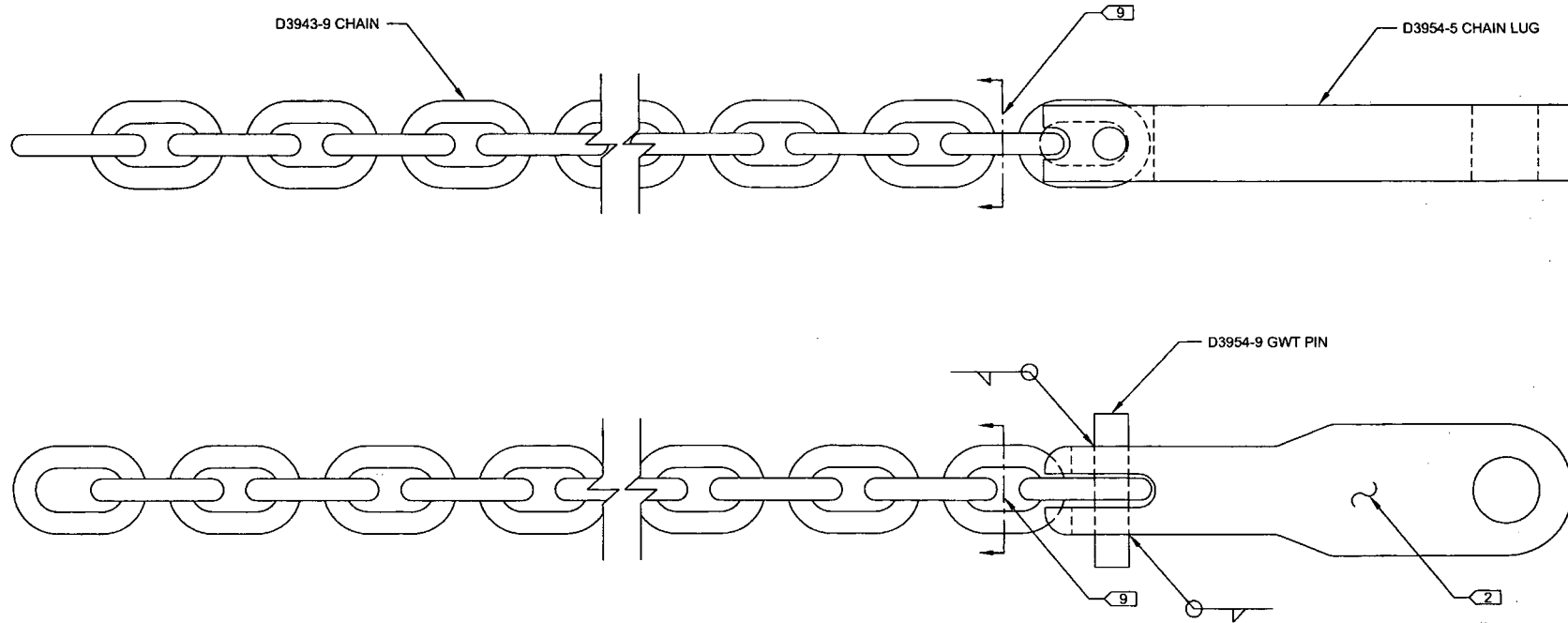
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

w/o 69044



D3943-053 CHAIN ASSEMBLY

RELEASED
2010-02-10
w/p

NOTES -053:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER QSI 004
- 9) MASK CHAIN FROM THIS POINT ON PRIOR TO POWDER COATING

DESIGN	DSTOW/AJS	DART AEROSPACE LTD	
DRAWN	97	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3943	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.	N/A	GROSS WEIGHT TOW CRANK ASSY	NTS
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8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

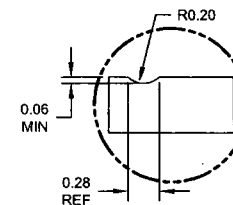
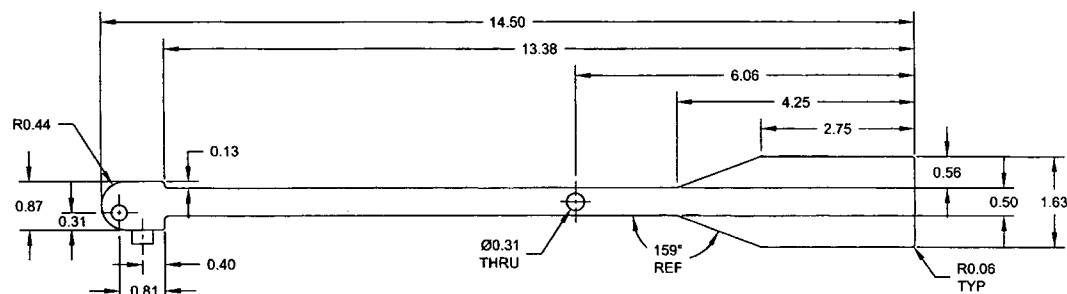
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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8 7 6 5 4 3 2 1

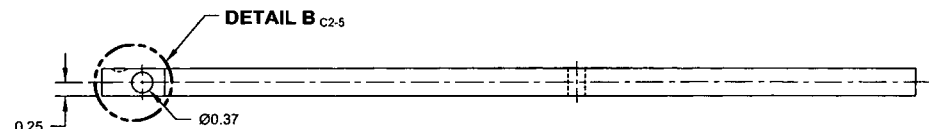
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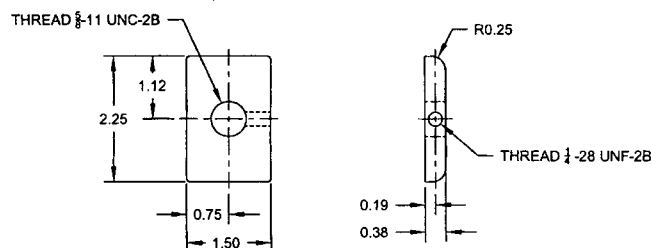
DETAIL B-B C7-5
(DIMPLE DETAIL)
(SCALE 2X)

u/069044

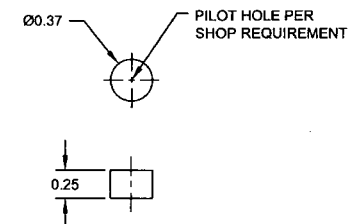
C



D3943-3 HANDLE EXTENSION



D3943-5 PLATE



D3943-7 STUD
(SCALE 2X)

NOTES -11-13:

1) MATERIAL -3 & -5: MILD STEEL, SHEET
AISI 1010-1025 OR ASTM A36/A366/A1008
OR CSA G40-21, 38W/44W/50W/60W/70W
REF DART SPEC M1010-S

OR: MILD STEEL, BAR
AISI 1010-1025 OR ASTM A36/A366/A569/A570
OR CSA G40-21, 38W/44W/50W/60W/70W
REF DART SPEC M1010-B

-7: MILD STEEL, ROUND BAR
AISI 1018-1025
PER MIL-S-7097
REF DART SPEC M1018-R

- 2) FINISH -3: POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3
-5 & -7: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE

RELEASED
2010-02-10

DESIGN	DSTOW / AJS	DART AEROSPACE LTD	
DRAWN	<i>aj</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>aj</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>aj</i>	D3943	SHEET 5 OF 5
APPROVED	<i>aj</i>	TITLE	SCALE
DE APPR.	<i>M/A</i>	GROSS WEIGHT TOW CRANK ASSY	NTS
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8 7 6 5 4 3 2 1

A

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